

S-BPM ONE 2010

Using Multi-Subjects for Process Synchronization on Different Abstraction Levels

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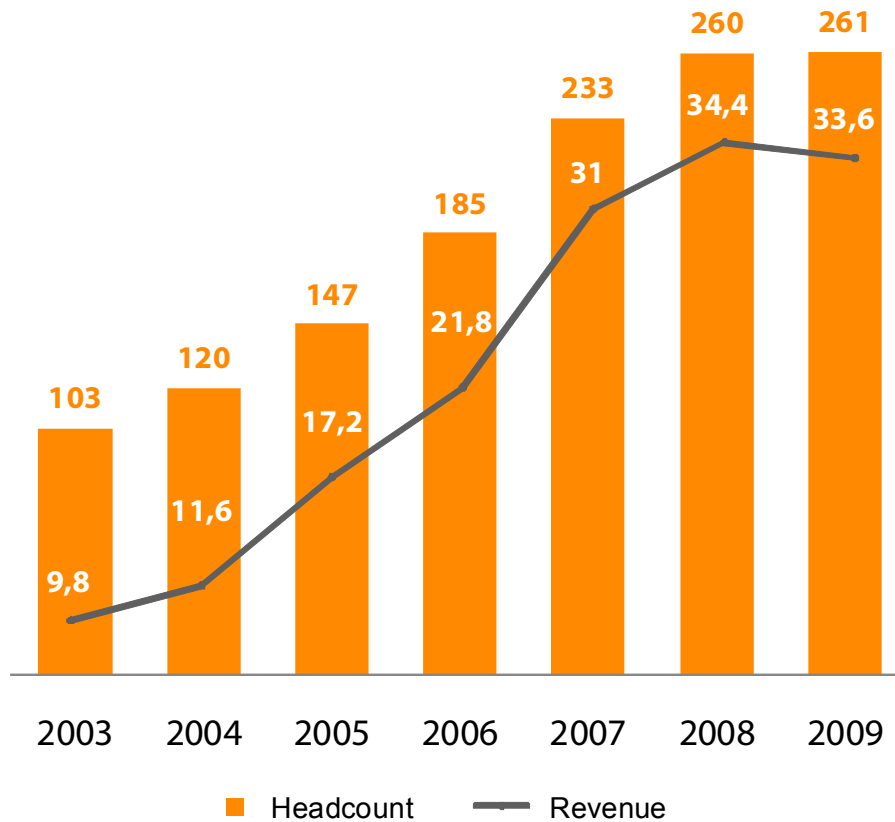
Karlsruhe, 14. Oktober 2010

Agenda

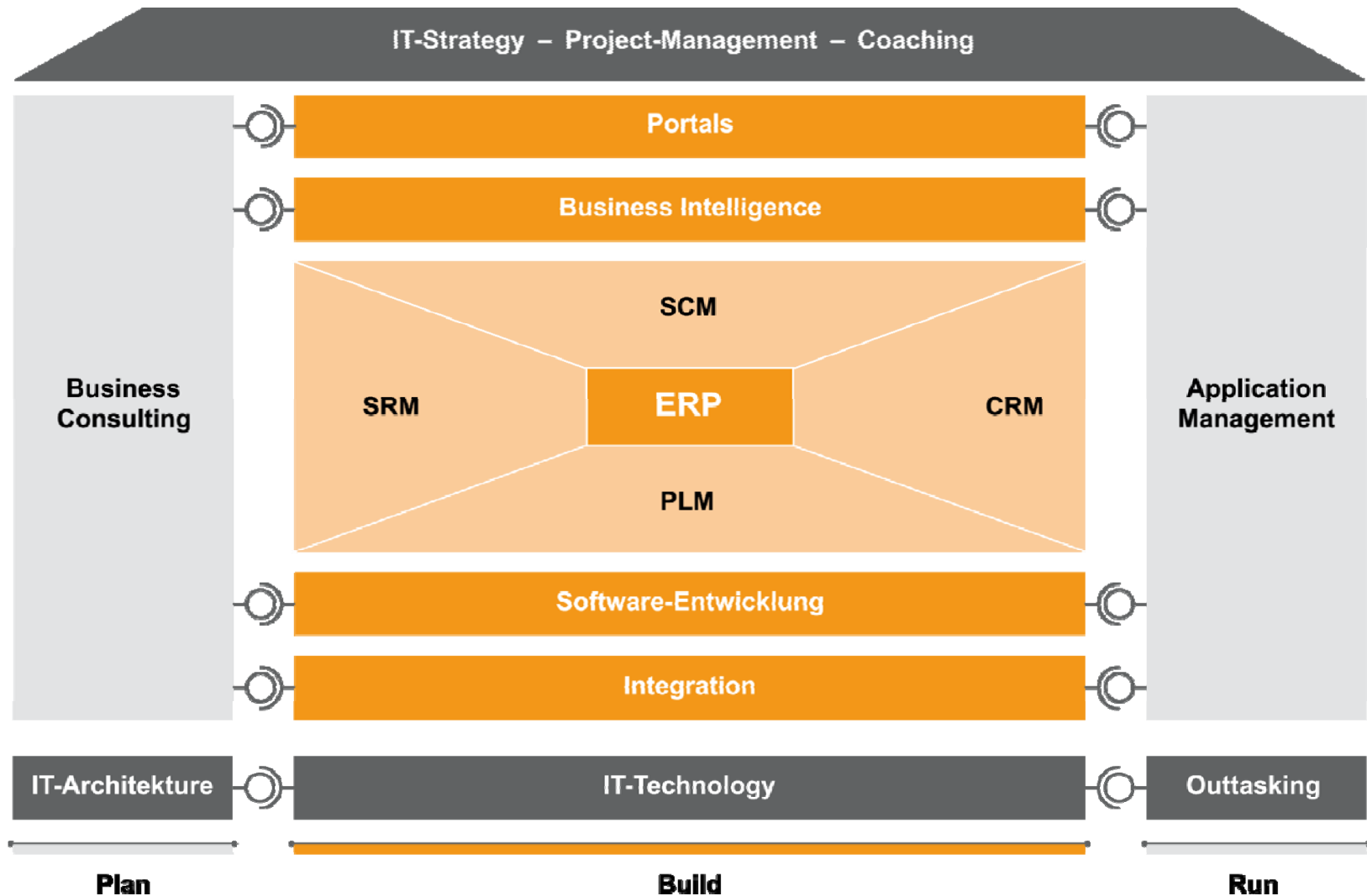
- I. A few words to Acando and Metasonic
- II. Why process synchronization on different process levels?
- III. How to solve it with S-BPM



Acando in Germany



Acando's Service Portfolio



Metasonic – Process. In Tune.



Innovative Business Application Development changes interaction between business departments and IT using subject-oriented BPM (S-BPM) to realize increased throughput with less costs, whereby the processes are placed at the center of attention

The METASONIC Suite

Based on the S-BPM Methodology
Agile, effective and efficient BPM
Subject oriented modeling with 5 symbols
Platform to create dynamic process based
Business Applications



METASONIC
BASE



METASONIC
BUILD



METASONIC
PROOF



METASONIC
FLOW

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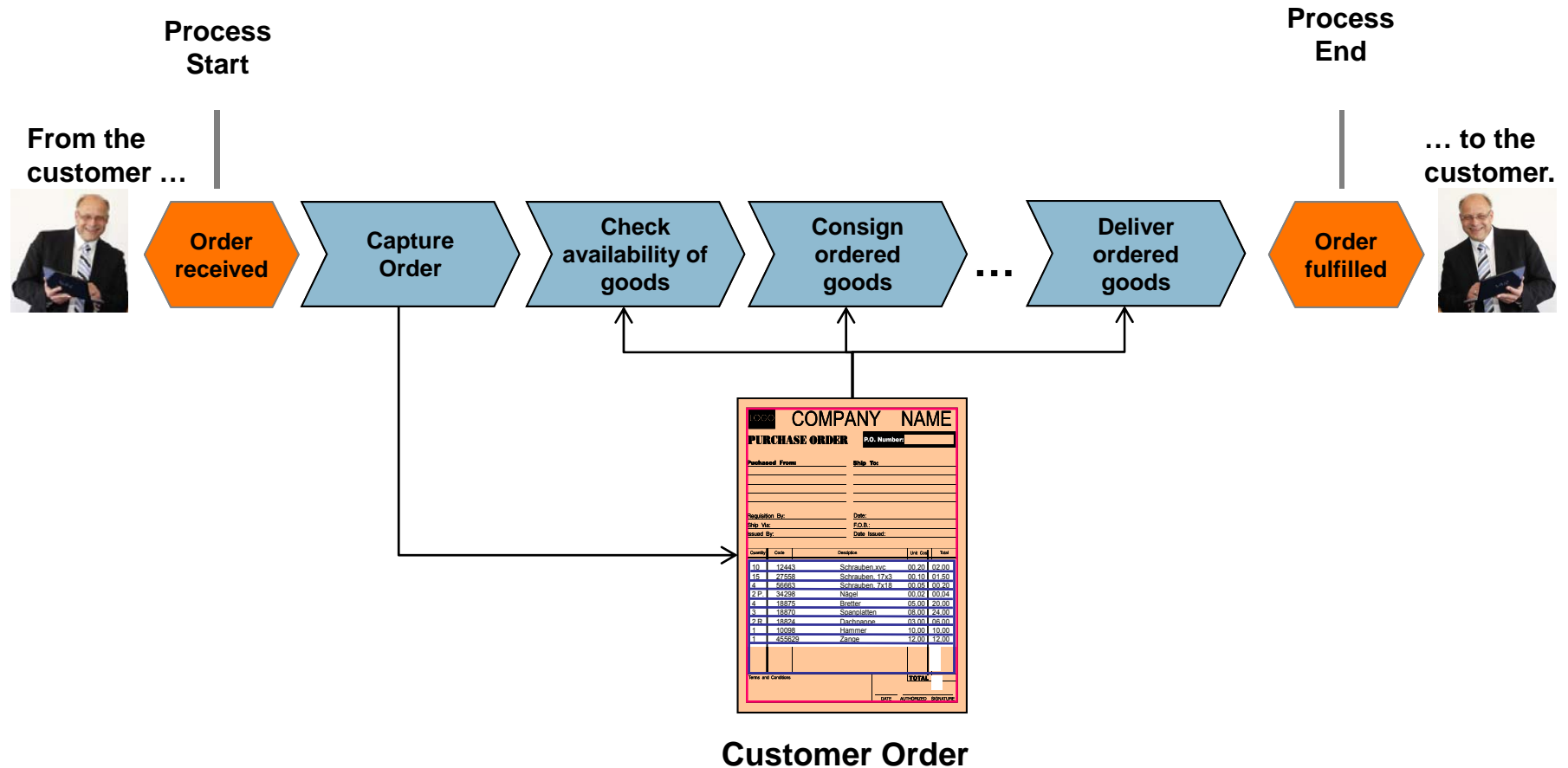
Business Processes in the Order Management & Logistics context ...are running on arbitrary abstraction levels



...but how to synchronize all these processes adequately?

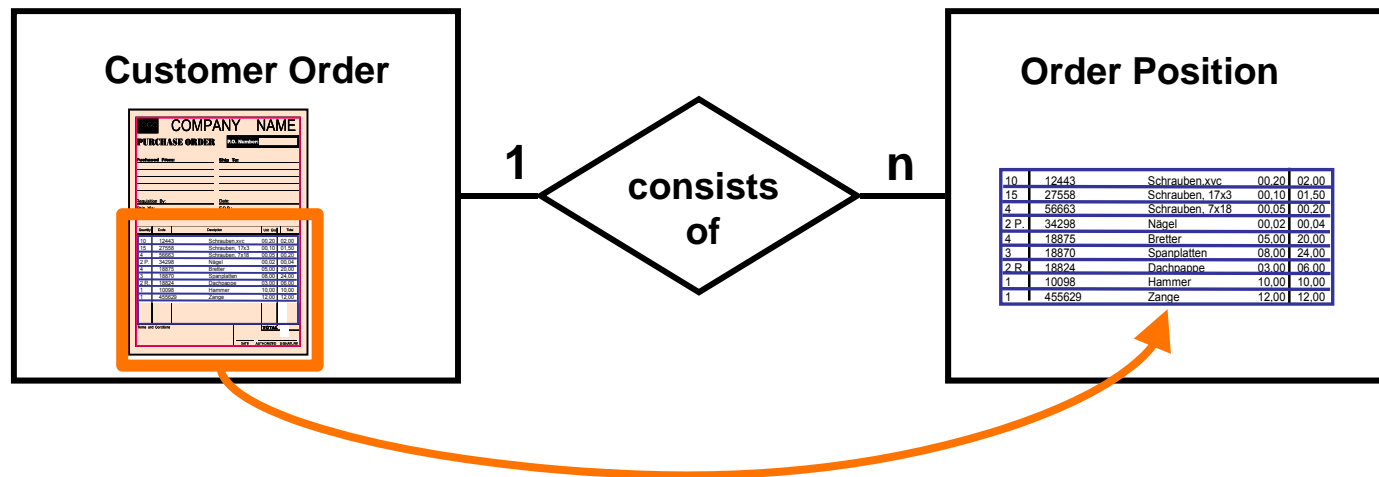
A typical Order Management process

... seems to be simple at the first consideration

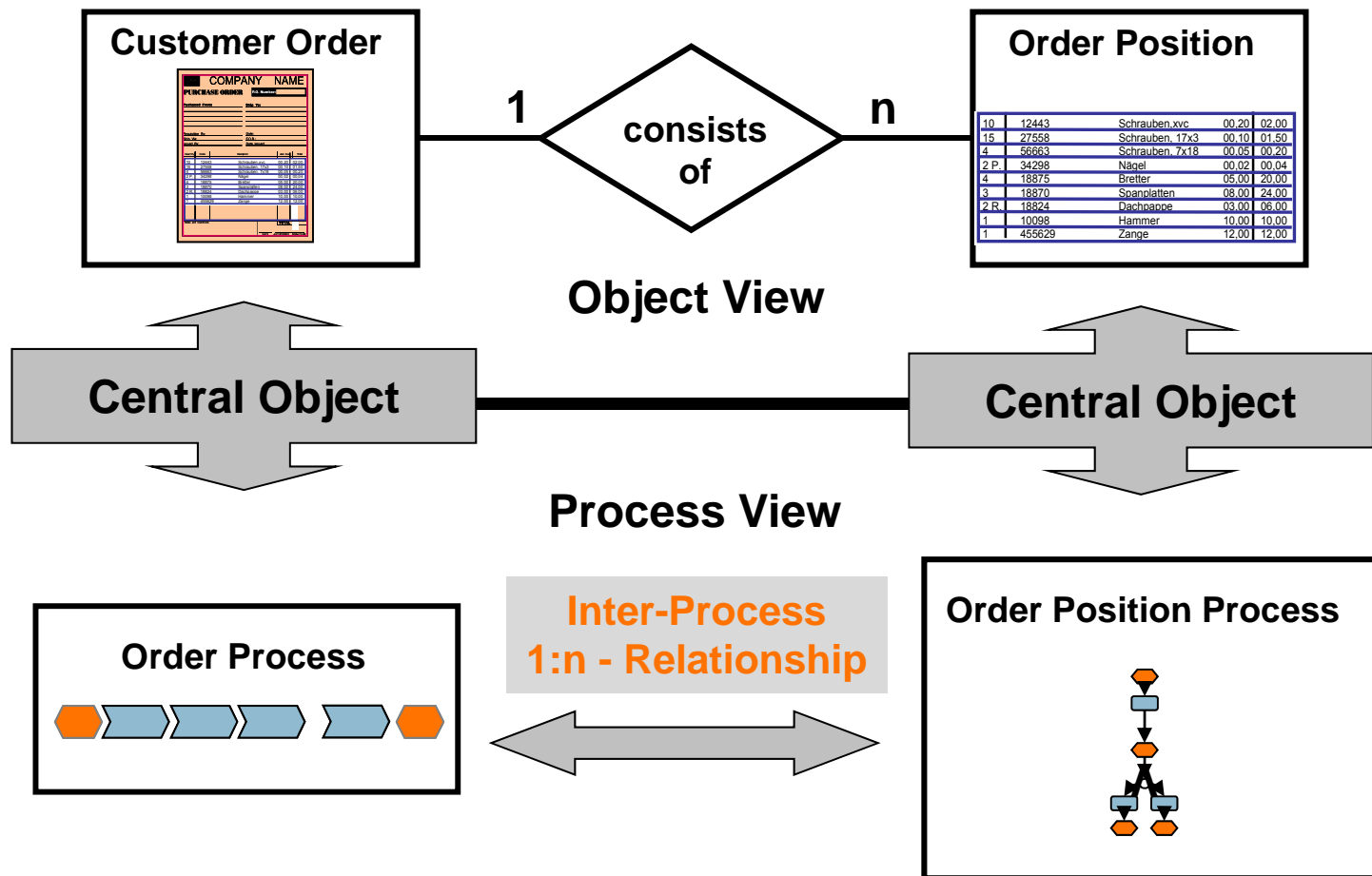


Hidden complexity in detailed abstraction level

The 1:n-Relationship between the Customer Order and the Order Positions ...



... has a corresponding 1:n-Relationship between the Processes ...



Source: Rodenhagen, J.: Ereignisgesteuerte Prozessketten (EPK) – Multiinstanziierungsfähigkeit und referentielle Persistenz. In: Nüttgens, M.; Rump, F. (Hrsg.): EPK 2002. Geschäftsprozessmanagement mit Ereignisgesteuerten Prozessketten, Workshop der Gesellschaft für Informatik e.V. (GI), November 2002, Trier, S. 95-107 (in German).

... and require the handling of multiple process instances!

From the
customer ...

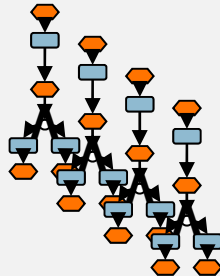


Order
received

Capture
Order

Create
n instances

Check availability
of ordered goods



Synchronize
n instances

Consign
ordered
goods

Deliver
ordered
goods

Order
fulfilled

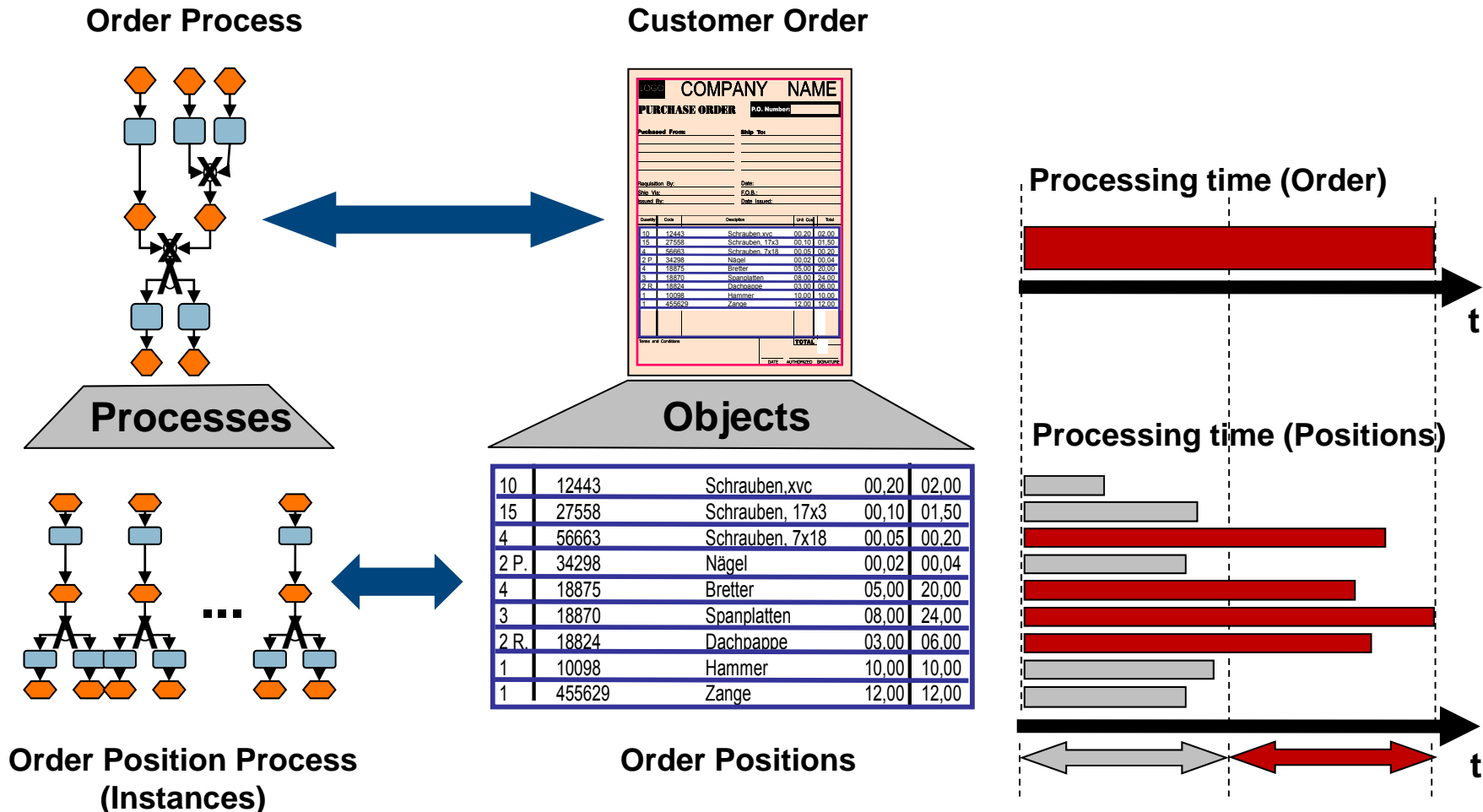
... to the
customer.



For **each order position**
the **availability**
of the ordered goods
is to be **checked**
pair wise independently
(i.e. **concurrently**)

The economical perspective

Competitive advantage by flexible, concurrent order position handling



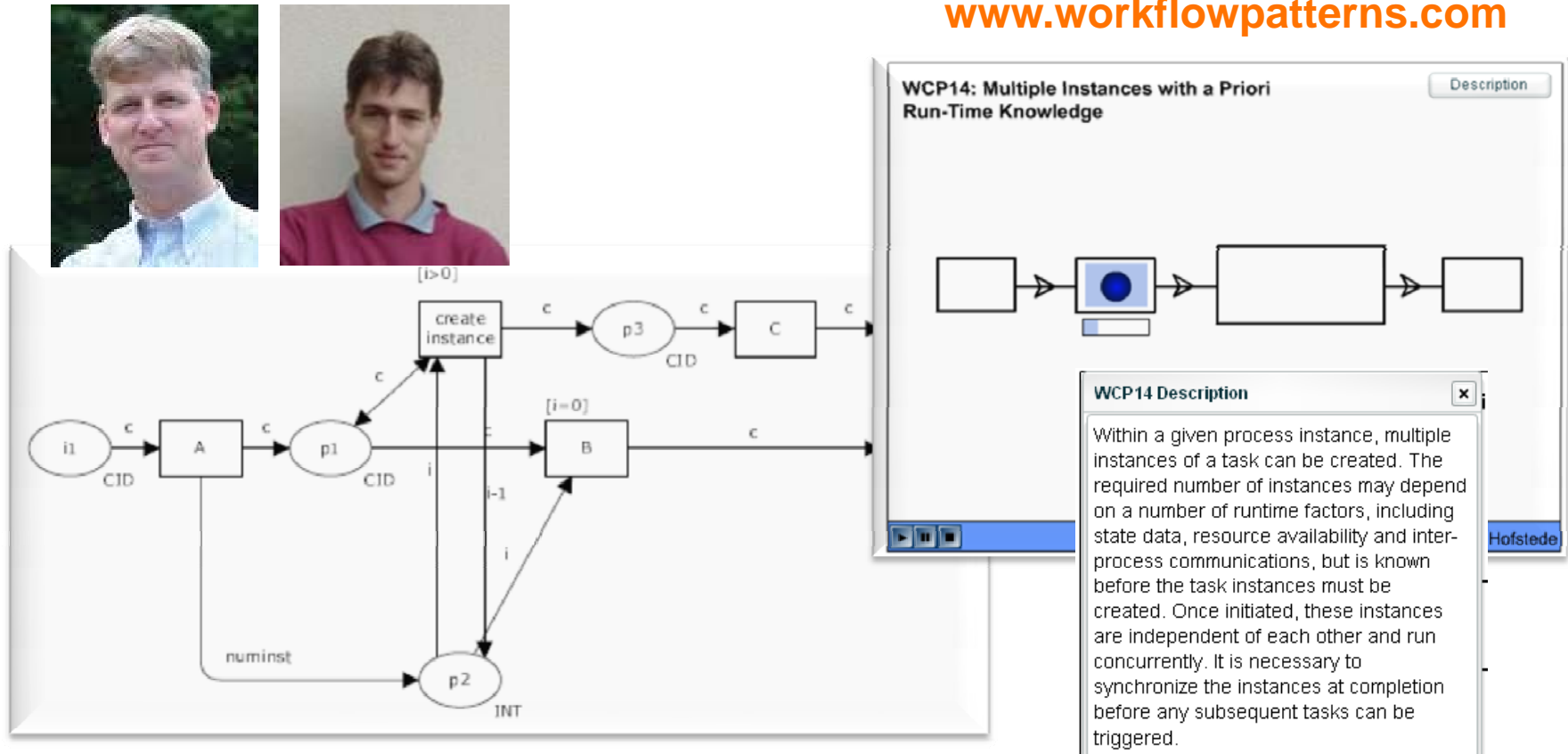
Source: Rodenhagen, J.: Ereignisgesteuerte Prozessketten (EPK) – Multiinstanziierungsfähigkeit und referentielle Persistenz. In: Nüttgens, M.; Rump, F. (Hrsg.): EPK 2002. Geschäftsprozessmanagement mit Ereignisgesteuerten Prozessketten, Workshop der Gesellschaft für Informatik e.V. (GI), November 2002, Trier, S. 95-107 (in German).

Workflow Patterns for Multiple Process Instance Handling

(Research Team of Prof. Dr. Wil van der Aalst and Prof. Dr. Arthur ter Hofstede)

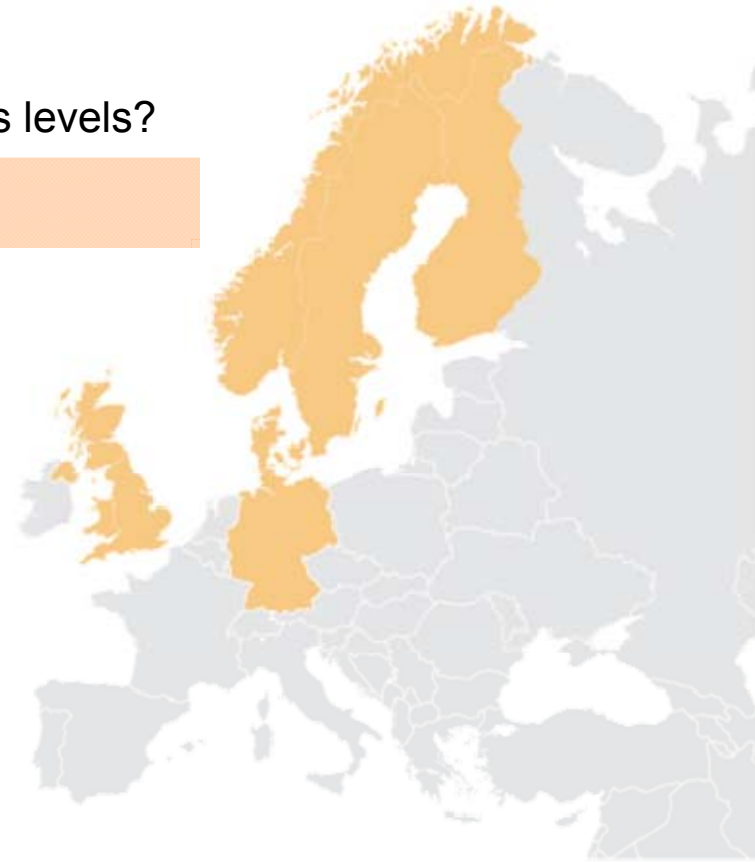


www.workflowpatterns.com

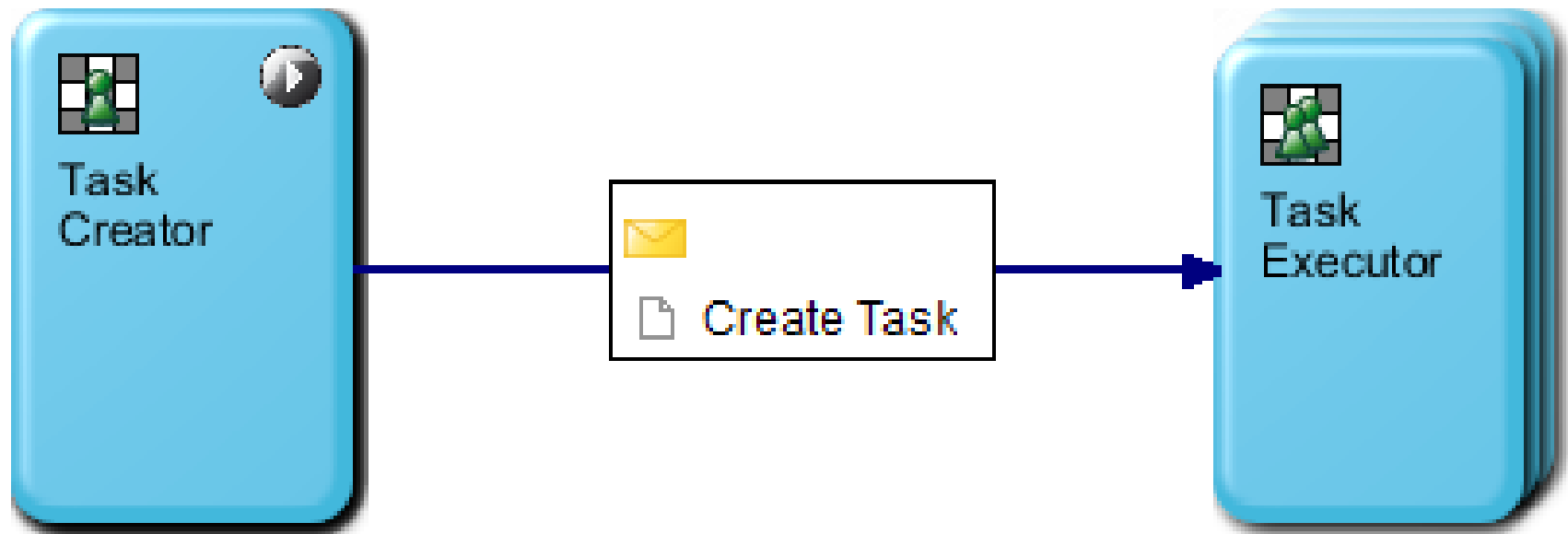


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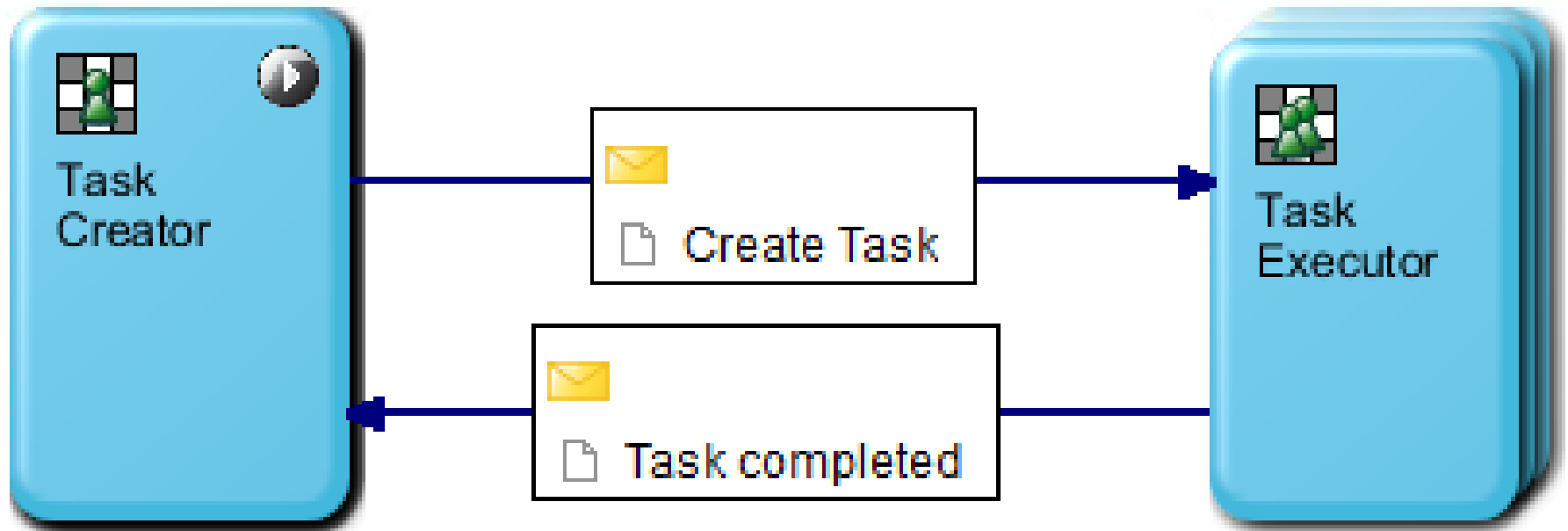


Multi-subjects in S-BPM enable execution of „multiple-instance-patterns“



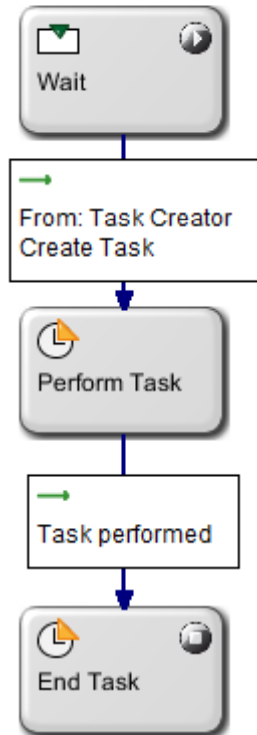
Communication view: nearly no differences between patterns

WCP 12, 14, 15, 36

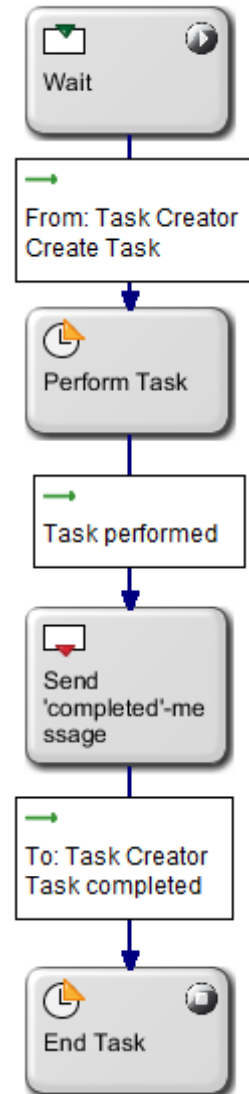


Internal behaviour task executor: nearly no differences

WCP 12, 14, 15, 36

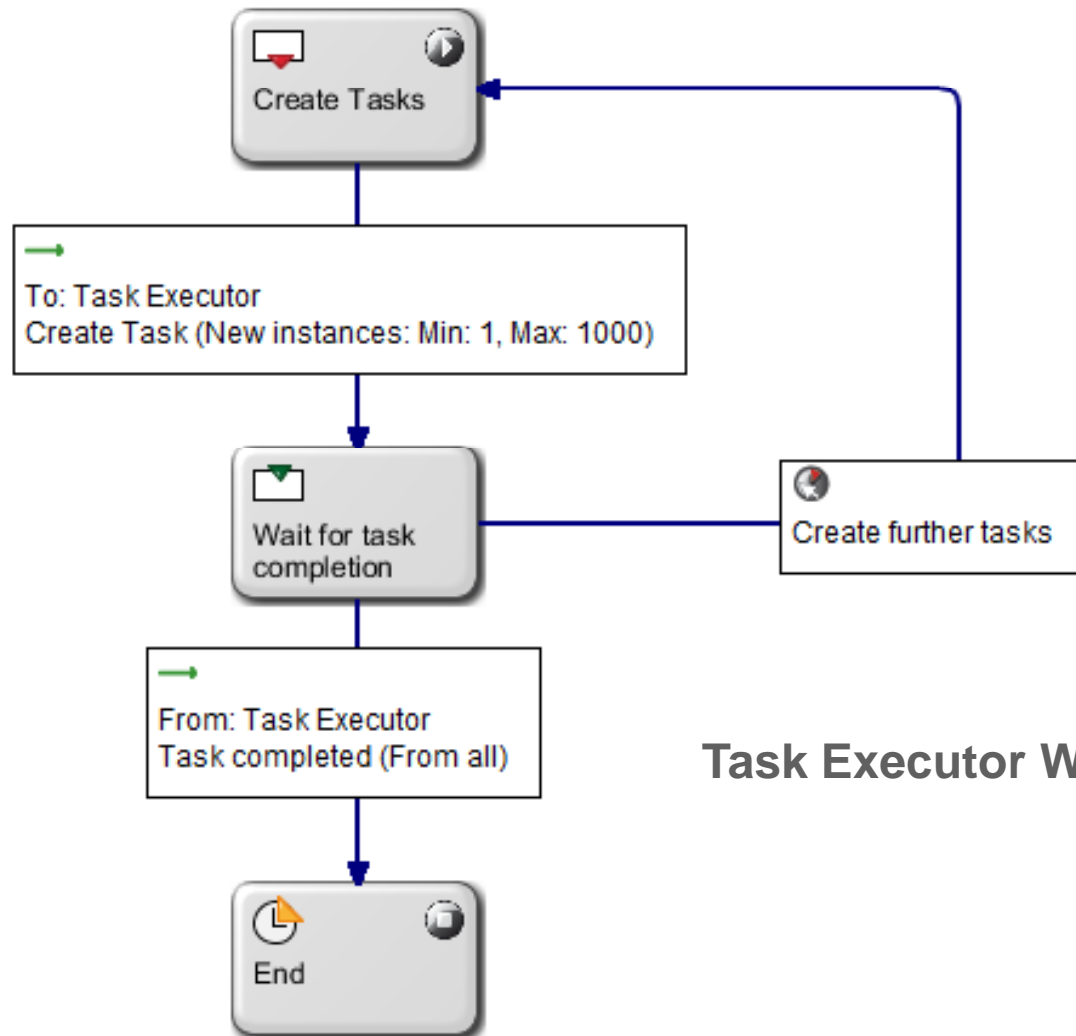


WCP 12 (= without synchronization)



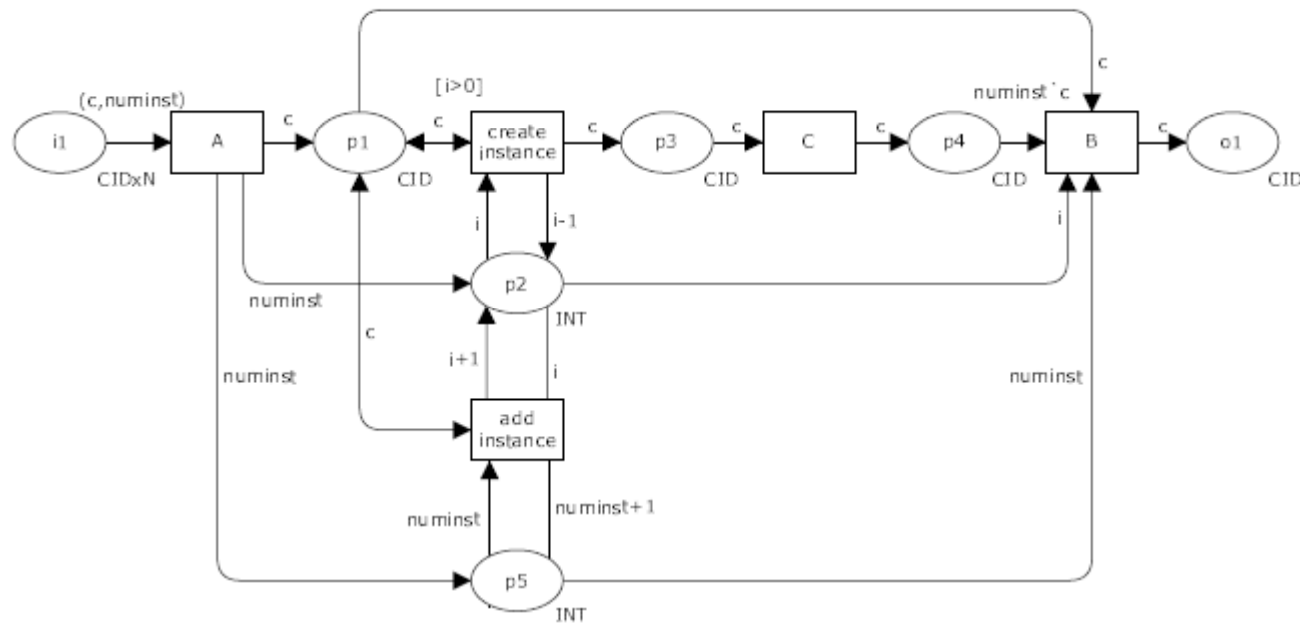
Patterns with synchronization

Internal behaviour task creator: depends on exact pattern WCP 12, 14, 15, 36 with increasing complexity



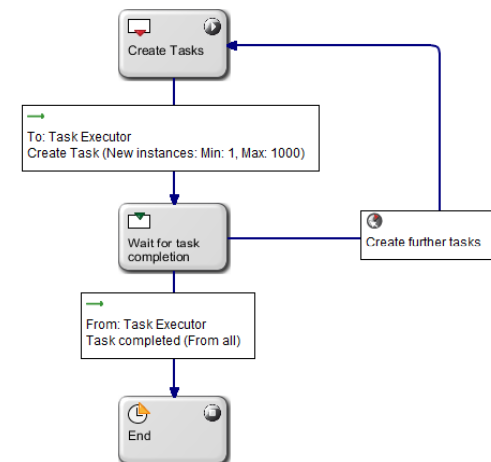
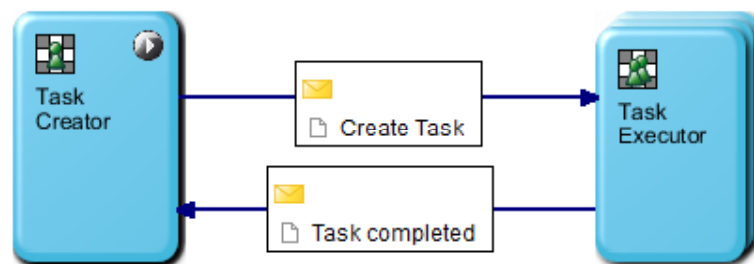
Task Executor WCP 15

S-BPM: a comparsion

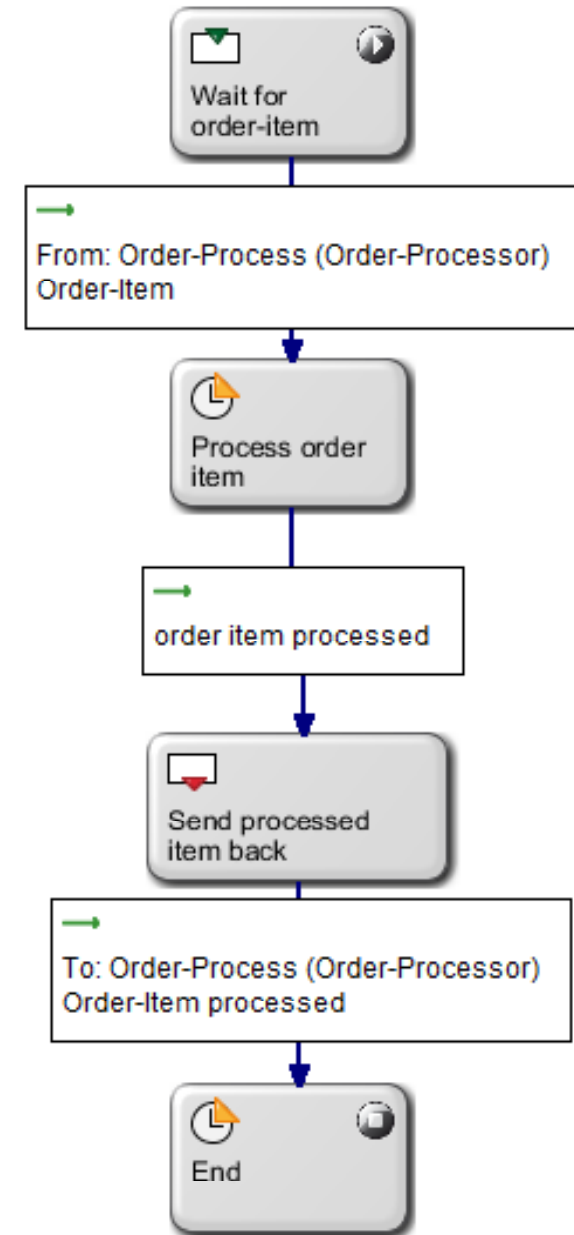
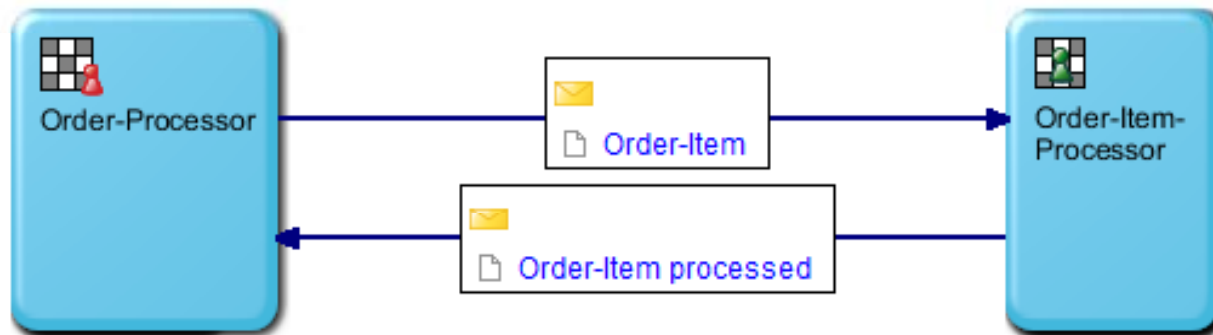


Source: http://www.workflowpatterns.com/patterns/control/multiple_instance/wcp15.php

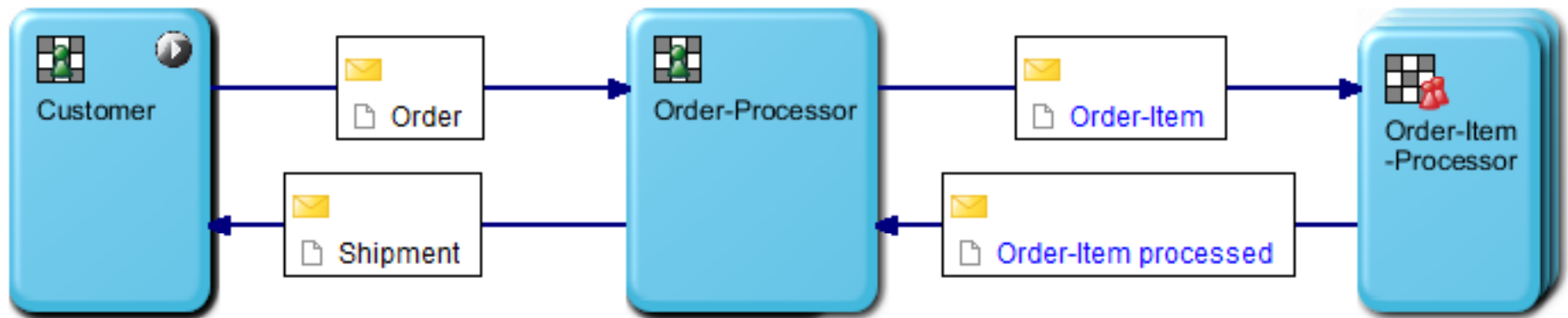
VS.



A typical Order Management process ... in S-BPM: Order Position Process (= task execution)



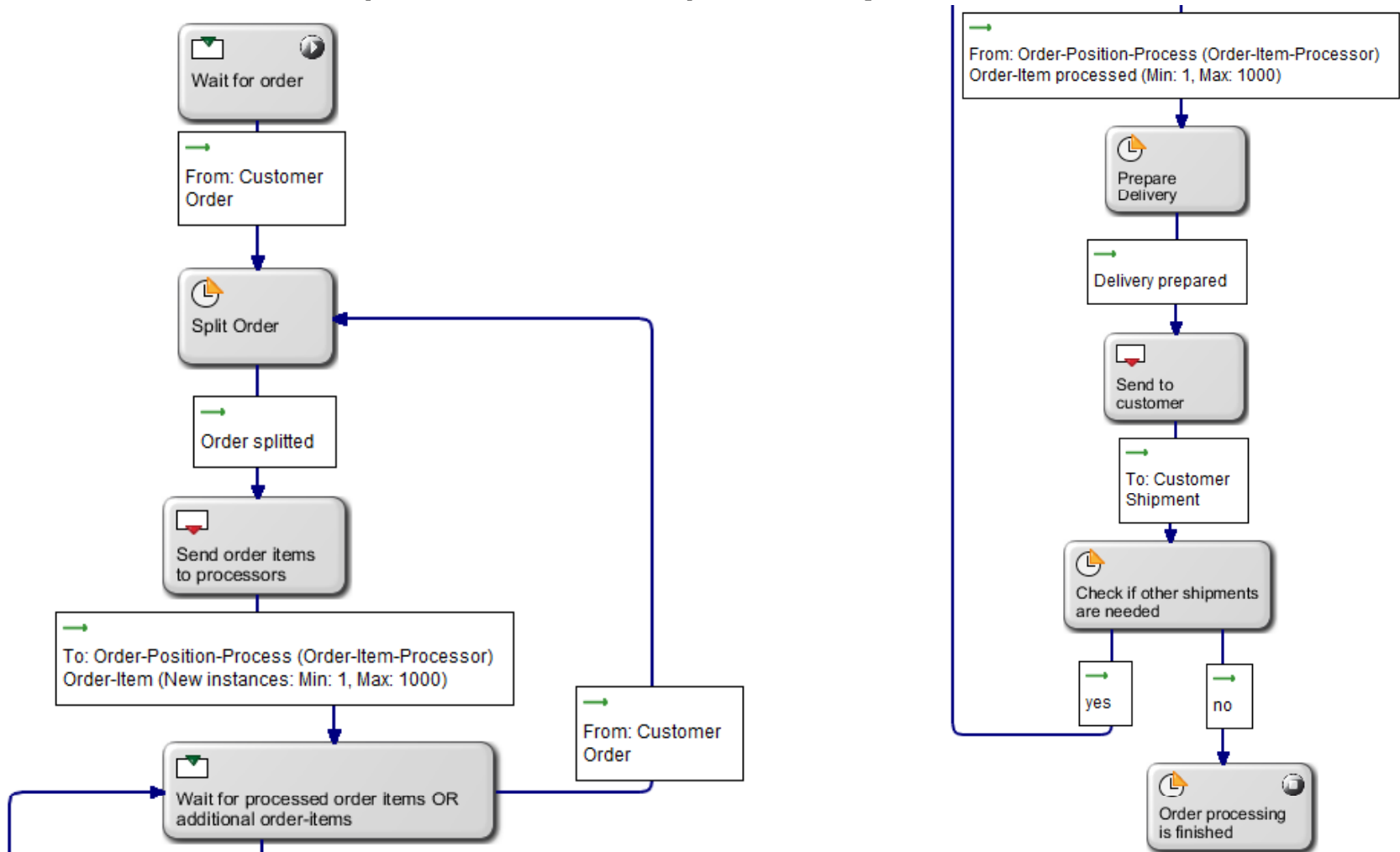
A typical Order Management process ... in S-BPM: Order Process (= task creation)



A typical Order Management process

... in S-BPM:

Order Process (= task creation): Order processor



Conclusion

- For logistics-processes, a comprehensive set of control-flow structures is required
- S-BPM satisfies multi-instantiation and synchronization schemes
- Multi-subjects offer an understandable way (even to non-experts) to model the hidden complexity

Thanks for listening...

...and do not hesitate to get in contact with us



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